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CANADIAN HOME ECONOMICS JOURNAL

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CANADIAN HOME ECONOMICS ASSOCIATION

- **The Household Scientist in International Development**
- **Mercury Pollution in Canada**
- **Is There Really a Need for Textile Flammability Legislation?**

[redacted]

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225 Sterling Road, Toronto, Ontario M6R 2B2

EDITOR:
MISS MARGARET C. SMITH
102 Airdrie Road
Toronto, Ontario M4G 1M3

ASSOCIATED EDITOR:
MRS. JANE SIMMS
Consumers' Gas Company
19 Toronto Street
Toronto, Ontario M5C 2E8

FEATURE EDITORS:
MRS. MARJORIE ELWOOD
60 Ravenscroft Circle
Willowdale, Ontario M2K 1W9

BUSINESS MANAGER:
MRS. LILLIAN GUSH
Apt. #206
606 Avenue Road
Toronto, Ontario M4J 2K9

ADVERTISING MANAGER:
MRS. SHARON CANNON
Kellogg-Salada Foods Ltd.
855 York Mills Road
Don Mills, Ontario M3B-1Y3

ADVERTISING REPRESENTATIVE:
MR. L. P. E. LACEY
2 Tremont Crescent
Don Mills, Ontario M3B 2S1
Telephone: 444-4731

REVIEWS:
MISS MARY McGRATH
Ontario Milk Marketing Board
50 Maitland St.
Toronto, Ontario M4Y 1C7

GENERAL SECRETARY:
MRS. JEAN BRADSHAW
409A Burnside Bldg.,
151 Slater Street,
Ottawa, Ont. K1P 5H3

Subscriptions and change of address should be mailed to Canadian Home Economics Association, National Office, 151 Slater St., Ottawa, Ont. K1P 5H3

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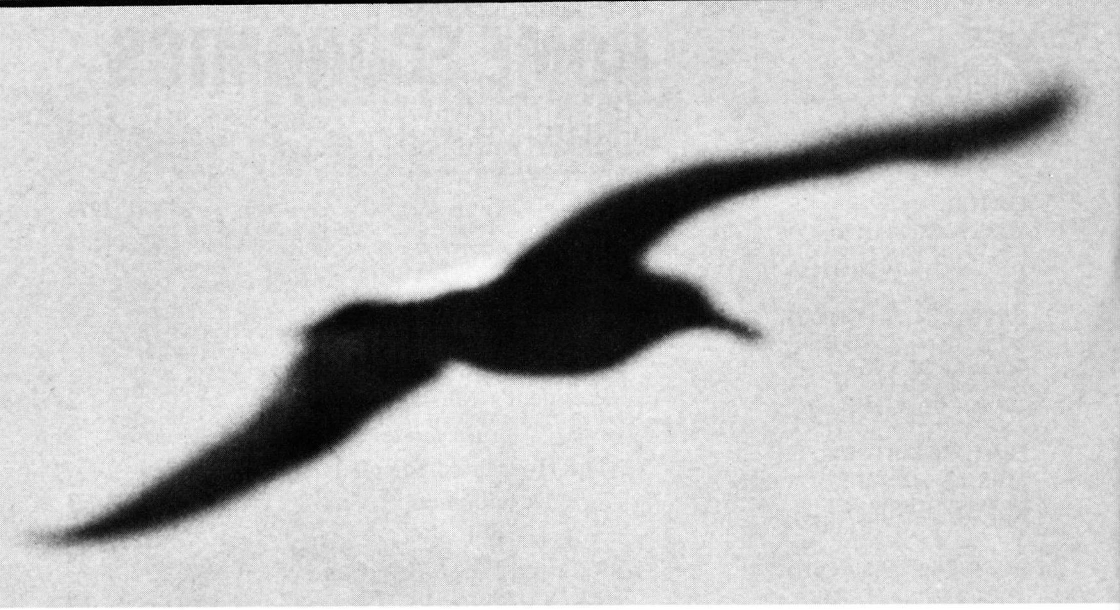
President's Message



Today we hear a great deal about change. In 1970 the theme for our Convention was "Challenge of Change". As I ponder this issue it seems to me that the Association is readying itself for change — perhaps we are more open to the idea than ever before.

Recently, I made the acquaintance of Jonathan Livingston Seagull (pictured above), the main character in a little book written by Richard Bach. Jonathan means different things to different people but everyone can find Jonathan within himself for Jonathan does not have a preconceived role. Perhaps the Association can heed the advice given Jonathan by some of the wise old gulls. For example, when Jonathan states "I can lift this old body no higher", the reply given him is: "But you can Jonathan. For you have learned. One school is finished, and the time has come for another to begin."

According to Chiang, one of the wise old gulls, Jonathan was "to stop seeing himself as trapped inside a limited body that had a forty-two-inch wingspan and performance that could be plotted on a chart. The trick was to know that his true nature lived, as perfect as an unwritten number, everywhere at once across time and space."

As an old gull proverb goes:

"The gull sees furthest who flies highest."

Winifred J. Bracher

The Household Scientist in International Development

By J. H. HULSE, Director of Agriculture, Food and Nutrition Sciences International Development Research Centre. Paper to the University of Toronto Household Science Alumnae, 70th Anniversary Symposium.

A certain Miss Capulet once asked: "What's in a name? That which we call a rose by any other name would smell as sweet." The young lady might well have had in mind the very distinguished profession to which this paper is addressed. I cannot off-hand think of any other profession which has proliferated so many alternative names for its members and its institutions. In various parts of the English speaking world we find: Domestic Science, Household Science, Home Economics, Domestic Economy, Home Technology, Consumer Sciences, Domestic Sociology, the Science of Better Family Living, and most recently Social and Domestic Ecology.

It is indeed surprising that you allowed your profession to be robbed of what is surely its true name: "Economics". The Greek word *"Oikonomia"* means literally "Household Management", and in England at the beginning of the 16th century "Yconomie" was still defined as "Howsolde Keepynge".

The etymological rot appears to have set in early in the 17th century and with the aid of Voltaire and Adam Smith, the deflowering of the economic rose continued into the 18th Century until the ultimate coup de grace was delivered by Edmund Burke when he wrote: "The age of chivalry is gone. That of sophisters, economists and calculators has succeeded and the glory of Europe is extinguished forever." By this time you had evidently and irrevocably sold your birthright and your good name to a bunch of male Philistines.

Both the Jewish and early Christian churches adopted the word "Economy" to connote the spiritual management of God's household. In this sense "Economy" was delightfully defined by a 19th Century theologian as "The judicious handling of divine gifts and a tactful dispensation of the Holy doctrine."

If we borrow from the sacred for the enlightenment of the secular we might define your profession as "the judicious handling of the household and its resources and a tactful dispensation of the knowledge whereby to do so."

It is the purpose of this paper to suggest how members of your profession individually and collectively might be more effectively active in programs of international development Throughout, the assumption is made that your profession is primarily and predominantly concerned with *Oikonomia*: the management of the household.

May I say at the outset it is my absolute conviction that there is no more important work in the sight of God or man than that which is dedicated to building happier homes. Was it not Juvenal who wrote: "Difficult indeed is it for those persons to emerge from obscurity whose noble qualities are cramped by the impoverished means of their homes." Juvenal might well have been writing of the many millions of Africans, Asians and Latin Americans whose noble qualities indeed will never emerge from obscurity until the quality of life within their homes is dramatically improved.

Your profession can make a contribution perhaps greater than any other to raising the standard of living in the world's poorer homes. But before we can help the less fortunate we must first discover what are their specific needs and then decide judiciously and tactfully what capabilities and resources we have offer.

A distinguished Canadian professor with whom I studied business management once remarked in a lecture that many companies go bankrupt because they never understand what business they are qualified to be in. Let it be said without fear of contradiction that many of your distinguished professional colleagues working in international development, an outstanding example among whom is Dr. Margaret Harrington, have demonstrated very clearly what business they are in and have contributed magnificently to the improvement of family well-being in many parts of the world.

Others appear to be less certain of their true role and how to serve the needs of poor families most effectively. Perhaps some have been unduly influenced by George Bernard Shaw's unfortunate and illconsidered comment: "Home is the girl's prison and the woman's workhouse". You will recall that this was written in his "Maxims for Revolutionists" and he may have inspired some of your number to revolt against a dedication to home affairs. Some have forsaken household science for what might variously be described as applied nutrition, social anthropology, or socio-econometrics.

I would not wish to denigrate the importance of any of these disciplines when they are competently practised in the cause of international development. But not infrequently the outcome of these diversions has been more descriptive than analytic; more theoretical than pragmatic.

By way of illustration one could cite the case of a young graduate in Home Economics who is studying the nutritional status of the members of a very poor rural community in a developing country. She is using the conventional food balance sheet method in which estimates of food availability are translated into average per capita consumption of calories and major nutrients.

Inherent weaknesses of the method are that it is based upon calculated averages and it makes no allowance for deviations which result from uneven distribution, seasonal variations and variable losses during storage and cooking. To compound her inaccuracies the young lady derives her food composition data from tables of analyses drawn up in the USA, based upon foods produced in the USA and cooked the American way. Her comparative dietary standard is the US

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'NICE' LEMON PARFAIT SQUARES

(no-bake recipe)

18	Nice biscuits crushed or blended
½	c. walnuts chopped
4	tbsp. butter, melted
1	pkg. (3 ounces) lemon jelly powder
1¼	c. boiling water
1	pint vanilla ice cream
1	tbsp. grated lemon rind

Combine biscuit crumbs, walnuts and melted butter. Spread ⅔ of crumb mixture on bottom of 8 inch square pan. Thoroughly dissolve jelly powder in boiling water. Add ice cream by spoonfuls and stir until melted. Add lemon rind. Chill until slightly thickened (about 10 minutes) and turn into prepared pan. Sprinkle remaining crumbs evenly over top. Chill several hours. Cut in squares to serve 8 or 9.

BOURBON TRUFFLES

(No-Bake Recipe)

8	whole PEEK FREAN BOURBON CREME biscuits, blended or finely crushed* (1 cup crumbs)
½	cup pecans, chopped
¼	cup icing sugar
¼	cup semi-sweet chocolate chips
1	tablespoon corn syrup
2-3	tablespoons rum or orange juice
	shredded coconut or chocolate shot

Combine biscuit crumbs, pecans, chocolate chips, sugar, corn syrup and liquid. Mix well until all crumbs are moistened enough to hold together. Shape into 1" balls, roll in coconut or chocolate shot.

Store tightly covered. Allow one week for flavour to develop.

Makes 18-24 confections.

*Tip: Chill biscuits before crushing.

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It will be very surprising indeed if the young lady does not conclude from her calculations that most of the population studied is malnourished. But by any rational standard a great many of the poor people of Africa, Asia and Latin America are malnourished. Many of them neither produce sufficient food nor earn enough money to buy food adequate to their needs through all seasons of the year: and it is unnecessary to engage in months of arithmetical exercise to discover these melancholy facts. They are evident to any intelligent and sensitive observer working within such communities.

The daily diet of the Sandi, a Sudanese rural people fluctuates between 2800 calories and 60 grams of protein immediately following the harvest to less than 1900 calories and 33 grams of protein before the harvest. Such variations which are common throughout the poor rural communities of the less developed world are rarely apparent in food balance sheet data.

What is most distressing in this instance is that the young lady in question is the only graduate in Home Economics to be found throughout an extremely large region, a region noted for its poverty, large families, poor sanitation, inferior health delivery and many other major domestic difficulties. A sensitive practical household scientist could deliver enormous benefit to this community by demonstrating and teaching others to demonstrate the benefits of improved household management and a more judicious handling of the families' meagre resources.

Recently IDRC received a request for financial support from a group of Home Economists working in a developing country. The objective of the proposed project was, by studying the habits of extremely poor village communities, to build an econometric model and thereby derive a series of numerical indices of better family living. It was never discovered whether the results were to be expressed in Frigidaire units, Delsey units or Arrid Extra-dry units. To my uncharitable mind however, it appeared that this and similar studies might be better described as "intellectual divertissements" than as "international development".

The peoples of the developing world are somewhat weary of being surveyed and described. May I suggest to those of us possessed of insatiable penchant for observing and describing the unusual and unfamiliar that we focus our attention upon Canadian flora and fauna, or upon the curious behaviour of our friends and relations, rather than seeking satisfaction by intruding ourselves into the lives and homes of poor harrassed peoples in other lands.

The home economists referred to were trained in North American universities. Can it be that their present intellectual orientation was acquired during their training?

The knowledge and philosophy imparted in our universities can greatly influence the future professional attitude and behaviour of these students from overseas.

Those who pursue what I believe to be the most important of all professions, the teaching profession, need at all times to remember that what may be relevant in a university or college curriculum designed for North Americans may be utterly irrelevant to the needs of African, Asian and Latin American students.

The tactful dispensation of knowledge requires above all a sensitive appreciation of the needs of the community the student will eventually serve. The developing nations possess very few professional scientists in all disciplines to deal with an enormity of technical problems. It is essential therefore during their training to direct the young scientists and technologists towards relevant and purposeful pursuits.

A dangerous temptation to many of us involved in international development is to devise a solution before understanding and defining the problem. I confess, more in sorrow than in anger, that my fellow food scientists and technologists are by no means innocent of this particular folly. Indeed it is depressing to contemplate how many scientific man-hours in North American and European laboratories have been devoted to the development of all manner of protein concentrates and protein rich foods without any clear concept of for whom they are intended or by what means they might be produced, distributed and used within developing countries.

Without wishing to detract from the importance of protein in the diet or to suggest that protein deficiencies do not exist, one should caution against placing excessive emphasis upon any single component of the diet of Africans, Asians and Latin Americans. Many of the poor people of the world are simply chronically short of food. Conditioned as we are by our perpetual preoccupation with girth control, we tend to overlook that many poor people are deficient of calories as well as protein, vitamins and minerals.

Much attention is given in our popular press to what is generally described as "nutrition education". Indeed after reading the gloomy prognostications of the proponents of this reducing diet and that health foods diet it is remarkable that our species has survived so long. While wholeheartedly supporting the efforts of the many agencies and dedicated people who in one way or another are promoting nutritional improvement among the malnourished, I have more confidence in those who seek to increase and diversify agricultural production and improved household management than those who simply preach "You must eat this because it is good for you".

Food habits have evolved from a long tradition: food acceptability is circumscribed by an exceedingly complex interaction of taste, instinct, experience, emotion, prejudice and social habit. And this is as true in Rosedale or Forest Hill as in the smallest village in Ethiopia.

People do not necessarily eat what is good for them: even food and nutrition scientists can be more objective about the diets of others than their own. Every North American food manufacturer appreciates the unpredictablity of the market place, and the greater potential hazard in launching a totally new and unfamiliar food product than in adding an additional flavour to an existing line.

How much more difficult is the path of the nutritional educator who seeks to introduce radical changes into the diets of poor people whose diets are, of necessity, conservative and born of a long cultural tradition. A greater opportunity is offered to the household scientist who tactfully seeks to bring gradual improvements into existing systems of household management and meal preparation.

Professor John Hawthorn quotes a delightful remark from an examination paper written by a Ghanian food science student: "Food tastes better if it is served by someone you like". A timely caution to all of us: that improvements in diet and household food management are best brought about through persons the consumer knows, likes and trusts. In other words, progress in the developing world is best achieved by those of the developing world.

Malnutrition among young infants can be seriously aggravated by excessive diarrhoea resulting from a variety of causes. In Colombia, a most exciting program of health improvement among rural families has been brought about by an imaginative Colombian paediatrician. He assembled a group of young Colombian ladies, many without university degrees, who for some months have been working among the poorer homes of the community. Under the guidance of the paediatrician these young women have suggested to the housewives means of improving sanitary practices, and food preparation procedures and they have acted generally as friendly guides and helpers to the poor women most of whom are burdened with very large families. The impact of these friendly interventions has been dramatic. For every 100 cases of severe diarrhoea among young infants at the beginning of the project there are now less than eight. The result has been a vast improvement in child health and nutritional well-being without any significant change in the basic diet. The financial investment has been modest, the greatest input having consisted of sensitive, tender, loving care.

The results of this remarkable experiment illustrate some very important principles:

First, the dramatic benefits which can result from an imaginative and sensitive approach to a clearly defined, practical problem: in this instance poor health among children resulting from unsatisfactory household management.

Second, that it is possible to work effectively within the limitations of existing household and social systems.

All too frequently our impatience with the conditions we find among poor communities prompts us to seek radical and extreme solutions. Whenever we feel disposed to introduce fundamental and far-reaching social innovations we might bring to mind the tragedies wrought in Africa by early Christian missionaries who converted polygamists and then forbade them to keep more than one wife. Having been deprived of all other resources by which to maintain themselves, there was little alernative for many of the rejected wives but to become prostitutes.

The project in Colombia also demonstrates the importance of helping the less developed to solve their own problems in their own way. What we can tactfully provide are the resources and relevant new knowledge. The judicious handling and application of these resources and knowledge is best left to those we are seeking to help.

The primary objective of the International Development Research Centre is to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions, and, in carrying out those objects:

(a) to enlist the talents of natural and social scientists and technologists of Canada and other countries;

(b) to assist the developing regions to build up the research capabilities, the innovative skills and the institutions required to solve their own problems.

Not the least of these problems are related to the welfare and resources of poor families which in turn are dependent upon efficient household management.

At the request of the Nigerian government IDRC has made possible the construction of a new type of rural cereal grain mill in which the locally produced grains: sorghum, millet, corn, wheat and cowpeas, will be processed into various kinds of flours. The precise purpose and overall specifications of the mill were defined by the Nigerians; IDRC has tried to provide the financial resources and a certain amount of technical information to meet the Nigerians' requirements.

Northern Nigeria is predominantly Muslim and, traditionally women practise seclusion during their child bearing years. Women play a comparatively minor role in agricultural production but assume the major responsibility for the preservation, processing and preparation of food within the household. A great many of them also process traditional foods for sale in the local market place. The value of women's work within the household is determined by an elaborate system of bookkeeping and each food processing service performed has a price tag.

For example, groundnut oil prepared by a housewife will be sold for cash to her husband when it is to be used for feeding the family. The grinding of cereals and other household food preparations each has its price and if a woman chooses to have these chores performed by someone else she must generate the cash necessary by the sale of other goods and services.

Since polygamy is common any one household will include several women each of whom tends to specialize in certain food processing activities. Complementary services are exchanged within each household through the pricing and bookkeeping system described. The pattern is gradually changing in that more girls now attend school and subsequently seek employment outside the home. These women can afford from their income to buy some of the services traditionally performed within the household. Consequently one encounters a growing demand for processed and "convenience foods", in particular milled cereals and baked bread. It is worth noting that in Africa, South of the Sahara, the consumption of bread, the most convenient of all "convenience foods", is growing at between 8 and 10 percent per year. IDRC is therefore also supporting a study to enable the Nigerians and other countries of the region to use much larger quantities of their own cereal grains converted to usable flours by this new milling technology in the production of bread and other processed foods.

In cooperation with Nigerian home economists and students from a nearby university, Jean Steckle, IDRC's Associate Director for Home Sciences and Nutrition, is organizing an in-depth study of a large random sample of households to study food preferences, cooking and food preparation facilities and practices, the pattern of expenditure upon various foods, and the income earned by many of the housewives who process cereal foods within their own kitchens for sale in the market place.

This study could only be undertaken by local women since male visitors outside the family are not allowed beyond a reception room located at the entrance of each house. Under no circumstances may they cross the courtyard which intervenes between the reception room and the kitchens and women's quarters.

The Nigerian study is similar in overall purpose to marketing studies conducted by North American food industries: to determine what products of the new mill at Maiduguri will best satisfy the greatest needs of the traditional and more modern households who will be its customers. It is important to emphasize however that the primary objective of the mill is to confer greatest economic and social benefit upon the community it seeks to serve, and which form the cooperative which will own and operate the mill.

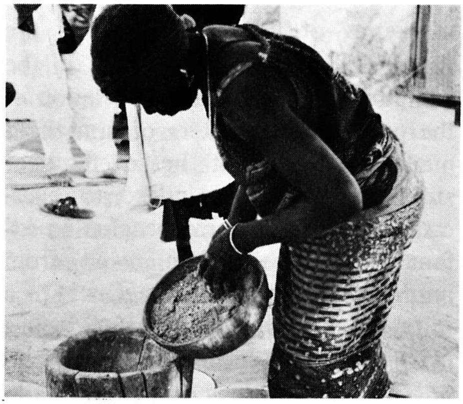
The next stage, having determined the future probable demand for processed indigenous cereals, will be to construct, adjacent to the mill, a pilot processing unit in which to manufacture bread, nutritious biscuits, pasta products and infant foods using local ingredients and offered at prices acceptable to the families of the community.

In Ghana, IDRC is supporting a rural fisheries research and development project. The artisanal fisheries along the coast of West Africa are indeed very much a family affair. The men catch the fish, the women preserve the fish by salt drying or smoking and are responsible for distribution and sale of the fish in the market places. At present Ghana imports close to 150,000 tons of frozen fish every year and hence there is a large demand which could be satisfied from increased local resources. The inadequate local methods of preservation limit the shelf life and the distance the local fish can be transported inland from the coast.

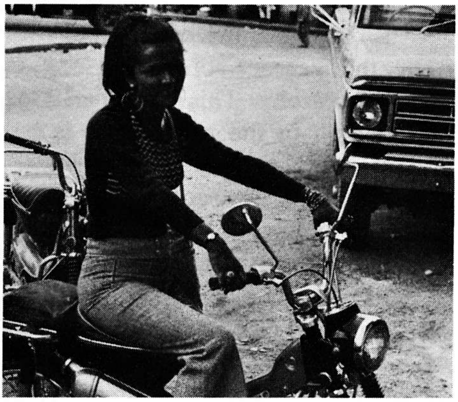
The research project which will serve a large region of coastal West Africa is being undertaken by a group of Ghanaian government and university institutions. The primary objective is to improve methods of fishing and thereby to increase the total catch. The second goal is to develop better systems of preserving and distributing the fish and the third is to better understand the total economics of this traditional system. If they succeed, the income of the rural fishing families will be increased and it should prove possible to preserve and transport more fish to people in the hinterland who subsist largely upon starchy root crops and to whom additional fish protein would be of significant nutritional benefit.

Working closely with the rural women of the project is a Ghanian home economist who has spent many years in a close working association with what are known as the Market Mammies. Since the preservation and

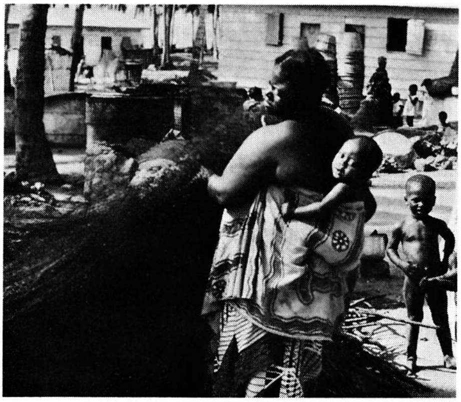
Housewife in Niger preparing sorghum flour.



I.D.R.C. is helping to develop a new rural milling technology to relieve African women of this daily chore.



Young Colombian Home Economics technician ready to visit rural families in high Andes.



Old chicken wire screens on which fish is smoked.

New framed screens supplied by Canada-Plus-One Project.

marketing of the fish is entirely the responsibility of the women of the community, the intimate association of the project with matters of household management cannot be overemphasized. It is difficult indeed to overestimate the long term benefits to infant health which can result from improved household management.

It is not usual for the armchair expert to propose one simple solution to poverty in Africa, Asia and Latin America: the widespread distribution of biological or mechanical contraceptives or other more drastic means of restricting child birth. But such measures cannot be forced upon people. Women will seek means to control their family size only when they consider it prudent to do so.

There is indeed evidence to indicate that good health derived from a satisfactory diet may significantly influence family size. A recent study of vital statistics in India suggests that rural families must bear more than six children to ensure the survival of one son to the father's 65th birthday. The average number of births in India per couple is roughly 6.5 which indicates that parents deliberately produce the size of family which empirically they have discovered will ensure security in their old age.

In the Colombian project some of the women are already asking their household advisers about the means by which to control their family's size. The same is true in other rural communities where IDRC is supporting agricultural research projects. One might reasonably predict that as family health is improved by increased agricultural production and better household management, infant mortality and sickness will decline and many more women will begin to seek advice on family planning.

There are other ways in which household scientists can be effective in international development. Throughout the poor rural communities of the tropical countries very large quantities of cereal grains, food legumes, fish, fruits and vegetables are lost through spoilage every year. Until rural food processing industries can be more widely established, there is an urgent need to devise means whereby housewives can preserve their harvested crops and fish and thereby carry them over from the seasons of abundance to those of scarcity. This matter of food preservation in the rural home is but one of many areas to which household scientists, in cooperation with food technologists, could profitably devote significantly more attention.

IDRC is supporting several multiple cropping projects in various parts of Asia and Africa, their objective being to increase the yields and diversity of the crops produced. In a multiple cropping project in Thailand members of the Home Economics Faculty of the university are helping women of the rural community to derive greatest economic and nutritional benefit from the wider range of crops being produced.

Sociologists continue to remind us that international development should concentrate upon improving the quality of life among the world's underprivileged peoples. But for many of the poorer people the first step towards a better quality of life is an improved diet. The majority of Asians, Africans and Latin Americans derive more than 75% of their calories and protein from cereal grains such as rice, wheat, maize, millet and sorghum and food legumes such as soya beans, pigeon peas and chickpeas. Consequently the highest priority in internationl agricultural research is being given to increasing the yield and improving the nutritional qualities of these staple crops.

In Canada where arable land is comparatively plentiful grain production can be increased simply by sowing a wider acreage. In many of the developing countries almost all of the land suitable for crop production is already under cultivation. Therefore the only means of achieving higher productivity is to increase crop yield: the weight of grain produced per acre of land each year.

You will recall in "Gulliver's Travels" Jonathan Swift wrote:

"And he gave it for his opinion that whoever could make two ears of corn or two blades of grass grow upon a spot of ground where only one grew before would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together."

During the 1950's the Ford and Rockefeller Foundations created two international agricultural research centres. The first, in Mexico, was devoted to the improvement of wheat and maize; the second, in the Philippines, to the improvement of rice. The conventional technique of increasing crop yield is to apply heavier doses of fertilizer. But if an excess of fertilizer is applied to traditional varieties of wheat or rice they develop top heavy heads and fall over, a condition known by the farmer as "lodging". Dr. Norman Borlaug at the Mexican wheat and Maize Improvement Centre decided that the solution to the problem of lodging was to develop varieties of wheat with short stiff straws able to support heavier heads of grain. Dr. Borlaugh succeeded in producing dwarfs less than two-thirds the height of traditional wheat varieties. Whereas the traditional Mexican wheat bread yielded only 1½ tons per hectare per year, some of the new dwarf varieties in Mexico are producing more than 11 tons of grain per hectare per year.

Following upon the Borlaug success, scientists at the International Rice Research Institute in the Philippines reduced the straw length of rice from 160 cm. to 100 cm. and enabled farmers in Southeast Asia to more than double their yields. In addition the IRRI scientists developed rice varieties which reach maturity in 100 days rather than the traditional 160 days thus permitting two and in some cases three crops of rice to be grown on the same land each year.

In India where these new high yielding varieties have been quickly accepted, wheat production has increased from 10 million tons in 1966 to more than 24 million tons in the current crop year and the average yield of wheat throughout India has increased by more than 50%. During the same period rice production in India has increased from 30 million to more than 43 million tons. The overall result has been an increase in cereal grain production in India from roughly 67 million tons in 1967 to more than 90 million tons in 1970 and a confident prediction of more than 100 million tons by 1974. Cereal grain production will therefore increase by more than 66 percent while the population increases by less than 18 per cent.

Scientists at the international centres in Mexico, the Philippines and elsewhere are now well on the way to producing traditional cereals of improved nutritional value by increasing the proportion of lysine in the amino acid spectrum of the cereal protein.

These scientists, who deserve our highest praise, have demonstrated the very great benefit to be derived from imaginative applied research: research directed to the satisfaction of a specific, clearly defined human need. They have also demonstrated that rural peoples in poor countries can and will benefit from new knowledge when it is clearly and demonstrably in their interest to do so. At the same time these events have created among the poor nations a great expectation from future scientific research and a considerable responsibility therefore rests upon scientists of both the developed and developing world to ensure that this expectation is not frustrated.

The plant scientists have provided a splendid example to all who are engaged or interested in food and agricultural and household sciences. But world hunger will not be solved by one group of scientists alone or by any scientific discipline working in isolation from the rest. Scientific isolation, of which members of most scientific professions are guilty, is one of the greatest contraints to progress in international development. One looks to the future for a much closer working cooperation among agricultural, food, nutrition and household scientists in research directed to crop improvement. It is vital that the professional interest and experience of household scientists be attracted to and intimately involved in future food and agricultural developments. Food crops are for people. Nutritional gaps and deficiencies are to be found in people's stomachs, not in farmers fields.

Household scientists should look at new developments with the eyes of the consumer, and describe to the plant breeder and the food technologist what new products of agricultural research can and will be acceptable to the consumers for whom they are intended, using the household tools and facilities available. It is interesting to note that some of the first examples of high lysine maize contained a soft floury endosperm which was unacceptable to many Latin Americans accustomed to a hard flinty corn. Some of the early high yielding dwarf varieties of rice were significantly different in appearance, milling and cooking properties to the traditional Indica and Japonica varieties. By genetic manipulation the high yielding characteristics are gradually being combined with traditionally acceptable properties in the new cereal grains. To improve the yield potential of the subsistence cereal grains and food legumes must continue to be the first objective of international agricultural research programs. Nevertheless the plant scientist needs and welcomes the constructive guidance of other interested scientists in developing crops which are highly productive, nutritious and acceptable to the consumer.

IDRC is supporting a cooperative research project by scientists in Mexico and the University of Manitoba to develop a new cereal grain "Triticale" which is formed by a cross between wheat and rye. The objective is to create a cereal which will grow on marginal land unsuited to the production of traditional cereals. In Ethiopia where triticle varieties are being tested by plant scientists, home economists are studying the reaction of Ethiopian consumers to traditional foods made with triticale flour. IDRC has also established two international working groups: one to advise us upon the biological value of triticale and the other upon its potential utilization throughout the developing world.

Recently, in a review of more than 300 papers dealing with protein fortification of bread and other baked cereals, it became evident that the papers fell into two classes: (a) those by cereal technologists describing how added protein affects the volume, crumb texture and color of bread; and (b) those by nutritional scientists reporting upon the influence of added protein upon biological value. Rarely did the two interests come together in a single paper and virtually nothing was said about the potential reaction of consumers to the nutritionally improved production. Let us not forget that the attitude of the most malnourished consumer cannot be determined solely by an albino rat or an amino-acid analyser.

Household science is surely one of the most humane of the sciences in that it is above all concerned with the welfare of people. All international development, multilateral and bilateral aid, should be concerned first and foremost with the welfare of people. Sometimes this is forgotten or ignored. Being qualified and experienced in representing the interests of consumers and families, perhaps there is a new and unexplored role for household scientists: collectively to become the conscience of the international development process.

The late Chairman of IDRC's Board of Governors, the Right Honourable Lester B. Pearson, had described "a weariness with well doing" among some of the richer nations. It is not difficult to find those who feel that the multilateral and bilateral aid of the past 25 years has yielded less progress than was originally hoped for. But this less-than-hoped-for progress may be as much the fault of the aid givers as of the recipients. Developed nations have tended to assume that by injecting quanta of financial and technical assistance they could energize the poor nations to jump like electrons into orbits of higher prosperity. Not a little of the technical assistance given has been accompanied by an intellectual insensitivity which at times has amounted to downright arrogance: an attitude of we-know-what-is-best-for-you!

While agreeing wholeheartedly with Rabbi Plaut of Holy Blossom Temple that it is not the duty but rather the privilege of the rich to help the poor, I would urge that in offering future assistance to the less developed world we would do well to bear in mind the words of Mwalimu Julius Nyerere:

"Development means the develop- of people. Roads, buildings, increases in crops .... are not development: they are only the tools of development .... An increase in the output of wheat, maize or beans is development only if it leads to the better nutrition of if it leads to the better nutrition of people ....

Development brings freedom, provided it is development of people. But people cannot be developed; they can only develop themselves .... An outsider cannot give a man pride and self-confidence in himself as a human being Those things a man has to create in himself by his own actions."

A short while ago the World Bank formed a Consultative Group on International Agricultural Research. This Group includes representatives of most of the major national and institutional aid donors and is supported by a Technical Advisory Committee composed of some of the world's leading agricultural scientists. The objectives of the Group and its Advisory Committee is to increase the tensity and effectiveness of agricultural research dedicated to the needs of the less developed nations. The Group has already mobilized substantial financial support for existing international research centres in Mexico, the Philippines, Colombia and Nigeria, and is creating new agricultural research centres: one in India which will seek to improve the crops of the semi-arid tropics and an animal health and production centre to be located in Africa.

Agricultural scientists are therefore making a serious internationally coordinated effort to increase agricultural productivity among the poor nations of Asia, Africa and Latin America. Because of their experience in interpreting the needs of Canadian households and consumers to various departments of research, production and marketing, are not household scientists intellectually and philosophically well equipped to interpret the needs of the world's poorest households to those whose wish and privilege it is to help them? The input required however is not in terms of nutritional theory or descriptive sociology but in terms of consumers' needs and the means of improving the availability and management of household resources.

Following the example of the international agricultural scientists, household scientists, through their national and international organizations, might profitably consider the creation of an international body specifically dedicated to a more active objective and sensitive concern for the households and families of the poor nations: a body devoted to the judicious handling of those resources and the tactful dispensation of such knowledge as will lead to a happier family life for many households throughout the world who are less privileged than we.

Canadians, in common with other prosperous nations, need to be reminded constantly that the problems of poverty and hunger throughout the world will not be solved within a year or even within the lifetime of most of those who read this journal: that the objective of international development should be to create healthier and happier households among many millions who, in the past, have had precious little about which to be happy.

But the rich cannot inflict their idea of happier family life upon the poor. Rather, we must seek to provide the less fortunate with the resources and knowledge by which to attain health and happiness in their own way.

It is not easy for us, the scientists of the richer nations, to be at all times sensitive and responsive to the needs of the less fortunate, and to recognize that their attitudes and ambitions may be significantly different to our own.

We could perhaps improve in tact and sensitivity by taking as our guiding principle the prayer of St. Francis of Assissi:

> "Where there is scientific discord to create union;
> where there is despair, hope;
> Where there is intellectual darkness, light;
> And, above all to seek not so much to be understood
> As to understand."

REFEREED RESEARCH SECTION OF C.H.E.A. JOURNAL

April 1973

At the biannual meeting of the Canadian University Teachers of Home Economics held in Winnipeg, June, 1971, a recommendation was forwarded to the Canadian Home Economics Association that the Journal become a refereed journal where research could be published.

The recommendation was passed by the Board of C.H.E.A. at its annual meeting, Halifax, 1971. A committee consisting of—Miss R. Berry, University of Manitoba; Dr. Rita Crowe, University of Saskatchewan; and Dr. A. Kernaleguen, University of Alberta investigated refereed journals and requested C.H.E.A. that as an initial step, a section in the journal be entitled "Refereed Research". This request was granted and the first research paper will appear in the July issue of the journal.

The committee of three was expanded to include a member from the various areas of Home Economics with an attempt to have as many universities as possible represented. This committee will act as the editorial board for the time being. The responsibility of the board will be to:

(a) Select reviewers for the specific papers submitted for publication.
(b) Board members may review papers themselves if these papers are in their field of competence and if the papers are not submitted by the university at which they are employed.
(c) Board members will be responsible for selecting a second group of reviewers in case of disagreement among the first reviewers.
(d) Board members will be responsible to see that complete anonymity is maintained when papers are reviewed.
(e) Board members will be responsible for collecting the comments of reviewers and assembling them in such a way that authors receive constructive criticisms and are informed of the decision of the review panel within 6 weeks after submission of paper.
(f) Should a member of the editorial board wish to submit a paper, another person in the area of competence who may or may not be on the editorial board will be asked to decide on reviewers and assume the responsibilities of processing the paper through.

The editorial Board of Refereed Research section of the Journal consists of the following:

Dr. Margaret Arcus	Family Studies	B.C.
Dr. Anne Kernaleguen	Clothing	U. of Alta.
Dr. Rita Crowe	Textiles	U. of Sask.
Miss Ruth Berry	Family Ec. & Mgt.	U. of Man.
Miss Elizabeth Gullett	Foods	U. of Guelph
Dr. Florence Farmer	Nutrition	MacDonald Coll.

Miss Jessie Rae	Nutrition	Nova Scotia
Miss Doris Anderson	Education	P.E.I.
Miss Winnifred Bracher	President of C.H.E.A.	U. B. C.
Miss M. C. Smith	Editor of C.H.E.A. Journal	Toronto

Deans and Directors of Home Economics have been supplied lists of staff members who could be called upon to review papers at each university.

Each member of the editorial board has a copy of these lists and will use them in selecting reviewers.

The editorial board members have already had considerable problems due to the fact that decisions are difficult to make without being able to talk things over. Letters take a great deal more time. For that reason, a tentative guide to authors is given in this Journal. We invite anyone to write in their comments since these could be incorporated in the next draft of the guide.

An invitation is extended to all researchers and graduate students to use the Journal as an outlet for publishing their research. Initially, we had hoped that we would contact these people individually, but, time is of a premium, hence we are using this Journal to invite the submission of papers, to ask the cooperation of reviewers, and the support of everyone concerned to make this section of the Journal a viable part of Home Economics in Canada. The reaction of readers would be particularly valuable to the success of this section.

GOALS OF THE REFEREED RESEARCH SECTION OF C.H.E.A. JOURNAL

1. To provide researchers with the opportunity to publish research in a Canadian publication directly concerned with the well being of families and individuals.
2. To make research findings readily available to other researchers, practising home economists and professionals from other disciplines.
3. To give visibility to research currently conducted at Universities and to stress its importance in all fields of Home Economics.

CONTENT—

For the present time, only research papers are solicited. Provided a sufficient number of high quality papers are submitted some reasonable attempt will be made to cover all content areas of Home Economics over a span of time. In the future, however, the editorial board of the refereed research section recommends that a "Letter to the editor" be initiated. This would possibly cover new ideas which haven't been fully researched but which deserve consideration. Exceptional review papers, if timely and of wide interest to readers of the journal will be considered. Some interest has also been expressed by editorial board members to publish abstracts of students' theses and/or dissertations possibly in a specific issue or one or two per issue.

CRITERIA USED TO EVALUATE RESEARCH ARTICLES—

1. Does the research report focus on a significant problem in Home Economics? Does it contribute to the purpose of research? (does it generate new knowledge, confirm or refine known facts?)

2. Are findings interpreted logically?
3. Does it use sound research methodology"
4. Is it scholarly, well organized, well written?
5. Is it presented in a form and length which makes publishing feasible?

PREPARATION OF MANUSCRIPT—

Research papers should be organized as follows:

1. Title page
2. Abstract (on page by itself)
3. Text of Manuscript
4. References
5. Tables (one per page)
6. Figures (one per page)
7. Acknowledgements (on separate page)

TITLE PAGE—

Since manuscripts will be submitted to reviewer anonymously, the title page is the only one where all identification appears.

(a) Title of paper—Keep as brief and concise as possible
(b) Name and present position of author(s)
(c) Name and address to whom galley proof is to be sent.
(d) Institution at which research was conducted and date of its execution.

ABSTRACT—

The abstract page follows the title page and starts with the complete title of the paper but does not contain the author(s) name. It should be a concise summary of the research and should stand on its own. It should preferably be approximately 100 words in length and should not exceed the maximum of 150 words. An attempt will be made to publish the French version of the abstract at the end of the article and the English version at the beginning.

TEXT OF THE MANUSCRIPT—

The text of the manuscript begins on a separate page and should be typed with inch margins on both sides, top and bottom. Each page is numbered at the top and right hand corner of the paper. In the left margin, number the lines of each page. This makes reference to a specific page and line easier for the reviewers, editorial board members anc author(s). Type double space and only on one side of the paper.

The author(s) is fully responsible for correct sentence structure, good English and accurate spelling. The style should be readable with a minimum of specialized language.

CITATIONS—

Citations in the text should be by author's surname, date and pages cited if direct quotation is used.

Examples—

Roach and Eicher (1965) found that it is necessary to . . .

Davis (1969, p. 464) stated: "It is . . ."
Recent research (White, 1965; Black, 167) support the findings . . .
Where reference is made to an article by 2 or 3 authors, the first time it appears all names must be listed. In any further reference use the first listed author and et. al.
Where reference is made to an article by more than 3 authors, it is acceptable to use the first listed author's name and et. al. at all times.

Example
First reference
Blue, J., M. Casey and J. Trirud, (1969) reported that . . .
Any further reference
Blue et. al. (1959) favor the theory . . .

Example
referring to a study by W. Brown; J. Carey; M. Smith; B. Blue and L. Casey, (1963)
Brown et. al. (1963) . . .

REFERENCES—

All work cited in the paper must be listed among the references. No work not cited should appear in the references.
References are typed on separate page double spaced throughout, alphabetized by author's surname, several references by same author are arranged by year of publication.

Examples—
Book—
Beitler, E. and B. Lockhart. Design for You. Toronto: John Wiley and Sons Inc., 1969.
Journal article—journal paged by issue.
Harris, T. The Savagery of good will. Psychology Today, 1973, 6 (8):33—34.
There should be no abbreviation for the name of the journals.

TABLES—

Tables should be kept at a minimum and only used when they add value to the paper. Each table is typed on a separate page, double spaced with complete caption at the top of the sheet. Each table is numbered and should be refered in the text by these numbers. Indicate the location of the tables as follows—

Insert Table I

There should be no vertical or horizontal rules except those in the heading and at the bottom.

GRAPHS AND PICTURES—

Like tables, graphs and pictures should be limited in number and used only when absolutely necessary. Graphs or drawings should be professionally prepared in india ink with mechanical letter device. They should have a clear heading and be numbered. eg. Figure I. Like tables, each graph is presented on a separate page with instruction in the text as to place of insertion.

Insert Figure I

STYLE AND ORGANIZATION—

The quality of the research writing rests on the author(s) of the paper. Use the passive rather than active sentence structure. "I" or "We" becomes very monotonous.

Organize material in a logical sequence and give enough details of techniques so that other readers can understand clearly the execution of the research.

SUBMISSION OF MANUSCRIPTS—

An author's submission of a research paper implies that the paper is based on original research not published elsewhere. Send 4 copies of complete manuscript to:

Dr. Anne Kernaleguen
Department of Clothing and Textiles
School of Household Economics
The University of Alberta
Edmonton, Alberta, Canada
T6G 2E2

Upon receipt of your manuscript, the author receives an acknowledgement of same. One copy of the paper is directed to the member of the editorial board representing the area in which the paper is written. Three referees are then selected and additional copies are mailed to referees. Within a month the author should receive a letter from the editorial board member giving a summary of the decisions, comments and suggestions of the referees.

The paper will be published as soon as possible after it is accepted.

CIRCLE THESE DATES

APRIL 1973

Wednesday, April 11, 1973

Regency Hyatt, Toronto, 8:00 p.m. T.H.E.A. meeting. Richard K. Manoff, New York. "Nutrition and the Media".

Thursday, April 26, 1973, 8:00 p.m.

University of Toronto Household Science Alumnae Association Annual Meeting. "Consumerism and the Home Economist", Mrs. W. Brechin, National President, C.A.C.

April 29 to May 2, 1973

Canadian Restaurant Association Show, Toronto.

MAY 1973

May 17 to 22, 1973

International Congress of Dietetics, Hanover, West Germany.

JUNE 1973

June 10-14, 1973

C.D.A. Convention, Montreal "Foods of the 70's"

June 15, 16, 1973

C.H.E.A. Board of Directors' Meeting, Vancouver, B.C.

June 16, 1973

C.H.E.A. — Annual Meeting, Vancouver, B.C.

June 25 - 29, 1973

American Home Economists Association, Atlantic City, New Jersey.

June 22 - 24, 1973

Home Economists in Business, Atlantic City, New Jersey.

June 25, 1973

Nutrition Society — Symposium.

The Miles 73 Symposium sponsored by the Nutrition Society of Canada and supported by Miles Laboratories Limited, is scheduled for Monday. June 25, 1973, at the University of Saskatchewan, Saskatoon. Seven speakers will discuss various criteria in the Assessment of Nutritional Status, with particular reference to the development and evaluation of new approaches, and the use of simplified procedures. Participants are being invited from Canada, United States and Great Britain. The Chairman of the Organizing Committee is Dr. J. A. Campbell, Nutrition Bureau, Health and Welfare Canada, Ottawa K1A 0L2.

June 26 - 29, 1973

Nutrition Society.

The Annual Meeting of the Nutrition Society of Canada will be held on June 26-29, 1973, at the University of Saskatchewan, Saskatoon, and will feature a half day symposium (Wednesday p.m. June 27) titled: Relationships between Pharmacological and Nutritional Effects of Nutrients. This will be discussed by four speakers from Canada and the U.S., each discussing the relationships in one of the following areas: minerals, vitamins, carbohydrates and amino acids, lipids. Dr. H. M. Cunningham, Health Protection Branch, Health and Welfare, Canada, Ottawa K1A 0L2, is Chairman of the Organizing Committee. The Annual Meeting of the Nutrition Society of Canada is held simultaneously with the Annual Meeting of the Canadian Federation of Biological Societies.

JULY 1974

July 7 - 12, 1974

C.H.E.A. Convention, Vancouver, B.C.

1976

C.H.E.A. Convention, Ottawa, Ont.

I.F.H.E. Convention, Ottawa, Ont.

1978

C.H.E.A. Convention — Banff, Alberta.

MERCURY POLLUTION IN CANADA

by F. A. J. ARMSTRONG

Department of the Environment, Fisheries Research Board, Freshwater Institute, 501 University Crescent, Winnipeg, Manitoba

The physical and chemical properties of mercury make the element indispensible in a modern industrial society; in Canada for example about 300,000 pounds have been consumed annually in recent years. The greater part of this is used in the electrical and chemical industries. A small fraction goes into the manufacture of pharmaceuticals and of compounds which, because of their special biocidal properties are useful in controlling growth of bacteria moulds or fungi.

It has been known for centuries that mercury compounds can be dangerous to humans and can cause acute or chronic poisoning. More recently it has been realised that the degree of danger and to some extent also the symptoms shown depend greatly on the type of compound concerned. The liquid metal itself and some of its insoluble compounds for example, are only mildly poisonous, though mercury vapour is quite insidiously dangerous. Most of the soluble inorganic compounds are corrosive poisons and are quickly and agonisingly fatal if quantities of a few tenths of a gram are swallowed. Chronic poisoning by inorganic mercury compounds progresses from soreness in the mouth, excessive salivation and loosening of teeth to ulceration of the colour, progressive kidney damage, disturbance of nutrition, anaemia and peripheral neuritis. In this type of poisoning mercury is not necessarily strongly retained by the body and its excretion may be hastened and recovery helped by administering drugs with a sequestering action.

The different organic compounds of the metal show great differences in their action. Some, such as the mercurial diuretics, are not retained in the body, being swiftly excreted, and can safely be given in gram amounts. On the other hand, the alkyl-mercury compounds in which a mercury atom is linked directly to (usually) a methyl (CH_3) or ethyl (C_2H_5) group, are toxic in the extreme. They are absorbed quickly by the body, attaching first to the red blood cells, and are able to cross the blood-brain barrier and to cause irreversible damage to the central nervous system. They have a special affinity for the sulphur atoms of proteins (being thus able to interfere with enzyme systems) and are tenaciously held in the human body. Chronic poisoning by alkyl mercury compounds usually shows a delay of some weeks before the appearance of symptoms, which progress from numbness of the mouth, hands and feet, irrationality, tremors, ataxia and impairment of hearing and vision, to blindness paralysis and death. These compounds can pass the placenta and affect fetuses *in utero* although the mother may not be affected, and infants may be born with permanent brain damage.

Compounds for this class are very effective as fungicides and for controlling bacterial slimes. They have been in use for many years in seed-dressing preparations, and at one time were used extensively as "slimicides" in the manufacture of paper pulp. It has always been realised that they were hazardous to humans, and users were cautioned. A red dye was incorporated in seed-dressing compositions in order to mark treated seed as a warning that it is unfit as food for man or animals. Nevertheless, by accident, mismanagement, or ignorance, mass poisonings, with many fatalities, have occurred from time to time. Mostly these incidents have been in developing countries, but a family in the United States was affected in 1971 in a pitiful case which was widely reported. Such incidents like this are of course not cases of pollution and have not called for any wide concern for the safety of the general public. However, poisoning by methyl mercuric chloride due to pollution of the sea in Minamata Bay and at Niigata in Japan did occur in the 1950's, with 168 casualties and 52 deaths among persons who had eaten sea food. It was discovered that this had been contaminated by the effluents from local chemical works, wheer some methyl mercuric chloride was produced as a by-product in the manufacture of intermediates for plastics.

A more widespread kind of mercury pollution was gradually realised in the 1960's to exist in Sweden. Starting with observations of a decline in numbers of wild birds and the finding of birds on farm land poisoned by mercury-treated seed grain, scientific investigations moved to studies of fish-eating birds, whose flesh and eggs were found to contain high concentrations of mercury, and from there to fish, which contained up to 9 parts per million of the metal. Moreover, unexpectedly and alarmingly, this mercury was found to be present as methyl mercury compounds.

Mercury pollution of Swedish waterways was found to be widespread, and to be associated with pulp and paper manufacture. It came partly from the use of organic mercury compounds to control slime, but mainly from the chemical plants (often located at the pulp mills) which manufactured caustic alkali and chlorine for the pulp-bleaching process. In these chlor-alkali plants mercury is used as the cathode material in the electrolysis of brine, and unless care is taken, appreciable quantities of the metal (20-40 lb daily for a typical plant) can be lost: some in the manufactured product, some to the atmosphere, and some in wastes which are discharged to the rivers.

These losses, though known, had not caused concern because it was assumed, very reasonably, that when discharged into a river mercury would form insoluble compounds and settle harmlessly to the bottom. Indeed, it does settle but does not remain harmless. Work by Swedish scientists showed that bacteria in sediments can convert it to methyl mercury compounds, which are soluble and are taken up by aquatic organisms.

These investigations and others on mercury pollution in Sweden led the Swedish authorities to set a limit of one part per million for mercury in fish for human consumption, basing this figure on what little was known about mercury levels in tissues of the minamata victims and upon their own studies of mercury uptake and excretion and on blood mercury levels in humans.

In Canada in the mean time, and before the Swedish work had been fully developed, work had been started by the Canadian Wildlife Service upon mercury levels in birds. It was shortly found that there were dangerously high levels in Prairie pheasants and partridges, and that some waterways might be contaminated. More scientists were engaged on the problem and at the end of 1969 a group at the University of Saskatchewan reported that fish from the Saskatchewan River showed levels of up to 10 ppm of mercury, and that these would be traced to pollution from a chlor-alkali plant in Saskatoon.

The Federal Government at once acted to detain fish from suspected areas and to set up an inspection service and a research program in the Freshwater Institute in Winnipeg. The Food and Drug Directorate of the Department of National Health set a limit of 0.5 ppm above which fish may not be sold, and this was enforced under a section of the Food and Drug Act and regulations. Contaminated fish was destroyed by burning to ensure that it could not be consumed by humans, domestic animals and wildlife. In the first 3-4 months of the scheme more than 1,000,000 lb of fish had to be incinerated, but later smaller amounts had to be destroyed as polluted lakes were closed to fishing.

Surveys conducted by the Freshwater Institute in Winnipeg and other Federal and Provincial agencies revealed which waterways in Canada were contaminated. After the Swedish experience chlor-alkali plants were suspect, and so also were pulp-mills, although in these the use of mercurial slime-control compounds had been all but discontinued for some years. It turned out that, in fact, most of the mercury pollution in Canadian rivers and lakes could be related to eleven out of the fourteen chlor-alkali plants which used mercury, in the Dominion. These 14 plants are stated to have consumed nearly 200,000 lb of mercury in 1969, and possibly one third of this was discharged in liquid wastes. Three plants discharge into the sea, but only one of these, in British Columbia, caused any pollution, which was confined to an area inshore which could be closed to commercial fishing.

Discharges from all plants are strictly regulated. Enforcement is by the Environmental Protection Service of Environment Canada.

All mercury contamination of fish cannot, however, be put down to man-made pollution. Surveys by Federal Government agencies have shown that there are many lakes remote from sources of industrial pollution, in which fish have somewhat more than the legal limit of 0.5 ppm mercury. In a good many of these instances it is known that there are bodies of minerals in the vicinity, of the type in which mercury is usually present. Then again, many of the larger sea fish and marine mammals are known to contain appreciable amounts of mercury. There was great public concern when the element was found in tuna fish in 1970. It is most unlikely that the seas are contaminated by industrial discharges of mercury; the quantity of these is insufficient to change mercury concentrations in the sea in any time less than several centuries. In the oceans, we must suppose, mercury has been present, and marine life exposed to it, almost since the seas were formed, and it is natural to think that ocean-dwelling animals as least, are so constituted as to be unaffected by it.

The limit of 0.5 ppm which has been set in Canada and the United States, for fish and sea foods appears to give a good margin of safety for humans. Sweden and Germany have a limit of 1 ppm (although in Sweden the authorities advise that fish should be eaten only once a week, and not at all by pregnant women). Canadian consumption of fish is relatively small compared with northern European countries. It is fortunate also that fish is the only food which is found to contain any appreciable amount of mercury, and levels in cereals, potatoes and other vegetables are extremely low.

There is, reassuringly, no single instance, to my knowledge, of any case of mercury poisoning among Canadians which can be put down to consumption of fish. It appears that at present, the situation is well controlled. A costly but effective inspection service ensures that fish of high mercury content cannot be marketed. Attempts are made to discourage anglers from eating fish from contaminated waters. Further contamination of lakes and rivers is checked by regulation of discharges from factories. Nevertheless, we have very considerable amounts of mercury in the beds of our lakes and rivers, and this mercury is indestructible. It appears that only a small fraction of this is needed to contaminate the fish, and the metal will present a danger for many years to come. There is no known way of destroying or "neutralising" mercury. In places it may be possible to remove contaminated sediments by dredging, but this is a very expensive operation. Thought has been given to covering over sediments, but to do this is again almost impossibly expensive. In time, natural sedimentation will cover over the contaminated material and bury it to a safe depth but this may take many decades or even centuries.

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Reviews

UNIT METHOD OF CLOTHING CONSTRUCTION

by the Iowa Home Economics Associaion
illustrated by Harriet Allen
Iowa State University Press, Ames, Iowa.

The revised edition of this text has many new features of interest to clothing teachers. Included in this fifth edition are sewing methods for knit fabrics, instructions for pant measurements, making corded loops, dangling snaps, and the Hong Kong method of seam and hem finishing. Updated instructions are also given for successfully handling interfacing, linings, underlinings, as well as "open" and "closed" techniques for unit construction.

All instructions are clearly written, easy to follow and accompanied by detailed illustrations which even the novice sewer could understand. Beginning with basic sewing skills in the introductory chapters, the book progresses to more advanced techniques for collars, buttonholes, pockets, sleeves and zipper closures, making the text a valuable guide for the more accomplished sewer as well.

This spirally bound book is printed completely in black and white—a feature which might deter more "colour" oriented students. However, the easy to follow instructions and large clear illustrations combine to make this text a comprehensive workbook on sewing techniques no classroom should be without.

Reviewed by: Janice E. Stover Eastwood Collegiate, Kitchener, Ontario.

FOOD POWER. A doctor's Guide to Commonsense Nutrition.

L. Earle Arnow, PhD., M.D. Nelson-Hall Company, Chicago, III. 291 pp. 1972

This book provides a wealth of basic and useful nutrition information accompanied by discussion and rationale which heightens the interest of the reader and gives a good understanding of the broad field of nutrition. Written in a clear and easy style, the author includes chapters on energy and calories, weight control, diet and heart disease, dental health and nutrition, minerals, vitamins, diabetes, cirrhosis, allergies, some inherited diseases of metabolism such as galactosemia and phenylketonuria, food toxins, food additives and food purchasing. The chapter on weight control gives good practical guidelines for controlled calories based on the exchange system.

In the discussion of arteriosclerosis and coronary heart disease, the author leans heavily on the weight of evidence suggestive of a cause and effect relationship between elevated blood cholesterol and arteriosclerosis, to the extent that the statements of the American Heart Association recommending modification of diets by all persons in the population are included.

The Canadian reader will find it necessary to consult Canadian Food and Drug Regulations, the Canadian Dietary Standard, and Canadian grades of meat, poultry and other foods to bring information on food additives, recommended nutrient intakes and food purchasing within Canadian standards.

Although this book was written for the homemaker, the reader would fare better if she had some background in nutrition. This book would be worthwhile addition to any high school or university library. It provides excellent material, expressed in sufficient depth to be meaningful, and in a manner that would provide an excellent guide in teaching nutrition for the home economist, nutritionist, dietitian, nurse or health education specialist.

Beverley Reichert, M.A., R.P.Dt., Nutrition Consultant.

RURAL FAMILIES AND THEIR HOMES

A Longitudinal Study of Ontario Rural Families

H. C. Abell, Phd.
School of Urban and Regional Planning, University of Waterloo,
Waterloo, Ontario, Canada, 1971. 66 p., paperback, $2.50.

Two longitudinal field studies of Ontario rural families were conducted in 1959 and in 1968 under the direction of the author. The purpose of the research studies was to identify ways in which the lives of Canadians living and working in rural areas are affected by the rapidly changing times, particularly by national and provincial policies and programmes affecting rural families and their housing.

The basic premise of the study is that most, if not all, of the characteristics of rural families either directly or indirectly affect or are affected by their housing conditions.

In 1959, 352 Ontario farm homemakers, widely spread across the province, were interviewed. In 1968, the same homemakers or the new residents of the same houses were interviewed in a similar fashion. The families were categorized as Continuing Farm Families, Transitional Families, or Replacement Families, which categories appeared to relate directly to stages in The Family Life Cycle.

The respondent sample is described as to Age, Housing, Stage in Family Life Cycle, Children, Occupation of Male Heads, Decision Making Roles, Attitudes and Behavior Related to Credit.

The rural homes lived in are fully described according to Age, Construction, Size and Adequacy, and Improvements. Amounts of money spent on improvements is compared to amounts of money spent on farm equipment and household labour saving devices. Reasons for the decisions to spend or not to spend are discussed.

Extensive data is available in the many tables and appendices.

This interesting study of process and change in Ontario rural families would be of particular interest to university students of housing, rural family life, and credit use. High School teachers may find the study of value in the same areas. The report is too advanced in its approach to be used by high school students per se.

Reviewed by:
Beverley J. Thompson (Mrs.), Head, Home Economics Dept.,
Elmira District Secondary School, Elmira, Ontario.

Abstracts of Current Literature

Prepared by the staff
of the Department of Home Economics,
Mount St. Bernard College, Antigonish, N.S.

Lipogenesis in human adipose tissue: some effects of nibbling and gorging.

G. A. Bray
1972
The Journal of Clinical Investigation
51:537-548

Research reports in the past had discussed the results of comparative studies on the effects of nibbling (dietary intake spread over 20 hours) and gorging (rapid ingestion of food within 4 hours) in the rat. The findings were then extrapolated to the human as a possible explanation of the night-eating syndrome of the obese. Previously, Brays laboratory fund that a high calorie intake was associated with carbon incorporation from glucose and pyruvate in fatty acids. These results led to the present study which differs in that it varied the time length of food ingestion of six grossly obese patients on a high calorie intake (5000 kcal).

The subjects were divided into two groups: Group I (3 males at or near maximal weight) and group II (3 females who just completed a weight reduction of 50-70 kg). Groups I and II gorged for a 2 week period and then nibbled for a 2 week period.

Besides the sex difference, the two groups differed in age (group II were lower than group I and, in 2 of the 3 subjects in group I, the carbohydrate intake (lower compared to group II).

Analysis of the data collected suggested a number of possibilities to the author (a) Group II metabolized more glucose than group I. (b) The presence of glucose significantly increased the conversion of pyruvate into fatty acids. (c) Group II had a greater adipose deposit from pyruvate than had group I. (d) During the gorging period, group II gained more weight than group I. (e) Lessened activity of the glycerophosphate cycle may be a secondary effect to obesity not a cause for obesity. (f) Enzyme activity during gorging and nibbling was not significantly different but substrate utilization was greater during gorging than during nibbling indicating fat deposit in human tissue may be under the control of some unknown mechanism, not the result of a change in enzyme activity. (g) Possibly human adipose tissue serves as a site for the *de novo* synthesis of fatty acids during periods of positive calorie balance. (h) Bray concludes his research paper with the suggestion that it is possible the frequency of meals has a relationship with lipid metabolism in man and in rats and that this may be inversely related to obesity.

The clean for Gene phenomenon: the effect of students' appearance on political campaigning.

J. M. Darley and J. Cooper
1972
Jornal of Applied Psychology
2:24-33

The "clean for Gene phenomenon" evidenced during the New Hampshire primary in 1968 gave impetus to research in the social-psychological aspects of dress. Field experiments conducted at Princeton University investigated the relationship between political campaigners' dress and appearance and their campaign effectiveness. In one study, "deviant-appearing" campaigners with long hair and dressed in dungarees and old army jackets, and conventionally dressed campaigners attempted to hand out innocuous leaflets in a middle class suburban shopping center. The "deviants" had a lower acceptance rate than the more conventionally dressed campaigners. Furthermore, shoppers who accepted the leaflets from the deviants were more likely to throw them away unread. The study suggested that deviant-appearing campaigners had more difficulty communicating information to potential voters. Knowing only that the campaigners for one candidate were deviant-appearing as compared with more conventionally dressed campaigners for a second candidate, voters in a second experiment were willing to ascribe more radical opinions to the candidate represented by the deviant-appearing campaigners. Because voters tend to associate dress with behavior, campaigners might be well advised to dress in such a manner as to maximize the likelihood of their gaining access to the voter.

Sweetness perception in relation to some textural characteristics of hydrocolloid gels.

S. G. Marshall, and M. Vaisey
1972
Journal of Texture Studies 3:173

Interest in the sensory properties of hydrocolloids or gums used as stabilizers and thickeners in processed foods has been increasing. Of particular interest is the tendency of some of these hydrocolloids to mask sweetness perception. Five hydrocolloids: Carrageenan (Carra), low methoxy pectin (LMP), agar, gelatin and cornstarch were prepared with equal amounts of sodium Sucaryl. The gels were also matched in hardness as measured on a GF—Zenken Texturometer in an attempt to compensate for the effect of this property on the perception of other less familiar textural properties. Terturometer measurements were made on 10 samples for each gel from each of four replications. An 8—member trained sensory panel assessed the relative sweetness of the five gels. Judges received ten pairs of samples from each of the four replications and were asked to state which member of the pair was sweeter. Significant differences among gels were evident for hardness, cohesiveness, chewiness, and gumminess. Gelatin gels were firmer than LMP and agar gels but differences among gels in textural properties other than hardness were more marked. Carrageenan, LMP and agar gels were less cohesive, less springy, less chewy and less gummy than gelatin and cornstarch gels, Carrageenan gels were springier than LMP and agar, but less elastic than cornstarch and gelatin gels. Cornstarch and gelatin were similar in cohesiveness, springiness and chewiness but cornstarch gels were less gummy than those of gelatin. Differences in apparent sweetness were also observed being greatest in carrageenan gels and least in cornstarch gels, LMP, agar and gelatin were always ranked in the same decreasing order of sweetness although the differences were not statistically significant. An investigation of the relationship of the texture measurements to the perceived sweetness indicated that the gels which tasted sweeter were also less cohesive, elastic, chewy and gummy than the less sweet gels. The possibility that the structure of the gels may influence the degree of taste-masking was suggested.

Flame Retardant Process Tops Sleepwear Standard

1972

American Dyestuff Reporter, 61:52

In recent years the subject of fabric flammability has become an issue of major importance in the textile world. Manufacturers must comply with government standards in this regard (U.S. standards), therefore, the problem opens a wide scope for research workers.

United Merchants scientists and Cotton Inc. continued a programme that was begun by government research workers and their findings led them to a process which they called "a major break-through" in the field of flame retardance. The trade name by which it is recognized is "Fire-Stop Cotton".

While the United States government standards require that a flame retardant finish withstand fifty home launderings, the new process is reported to have an endurance exceeding this number. In fact, repeated home washings seem to improve the finish, and commercial launderings to not show any significant breakdown.

The process is usable on 100% cotton fabrics that are knitted or woven. This factor should prove to be a great boon for cotton manufacturers. To date it has been successfully used on cotton flannelette, print cotton, cotton terry, broadcloth, and brushed knits.

Very often a finish will serve the purpose for which it was developed while at the same time it will show some unfavourable side effects, such as the weakening of the fibers. Quite the contrary seems to be the case with Fire Stop Cotton. The researchers reported that the cotton thus treated has kept its natural look and feel. Furthermore, it has suffered no significant loss in tensile strength, emitted no offensive odour, and showed an increased degree of absorbency.

While merits of this new development may far outweigh its limitations, nevertheless, the research workers acknowledge that the latter do exist. It was found that the tear strength property is slightly decreased and that the flame retardance property is very much weakened by the repeated use of chlorine in the laundering of such treated fabrics.

Since the trend in textiles seems to be towards the improvement of presently existing fibers, it would seem that a flame retardant process such as "Fire-Stop Cotton" should surely prove to be a tremendous "break through" in the textile world.

Weight at menarche: similarity for well-nourished and undernourished girls at differing ages, and evidence for historical constancy.

R. E. Frisch, Ph.D.

1972

Pediatrics, 50:445-450

Findings that the mean weight of early and late maturing girls did not differ at menarche, at the initiation of the adolescent growth spurt, or at the time of maximum growth, although the heights at these three stages were significantly different, prompted the testing of the hypothesis that a critical body weight is a trigger for menarche.

Subjects were white Alabama girls, 30 undernourished and 30 well-nourished controls. The home diets of the undernourished girls were restricted in both quantity and guality while those of the well-nourished girls fulfilled the requirements of the Recommended Dietary Allowances.

At semi-annual or annual intervals, the weight and height of each girl were recorded, and the date of menarche was recorded for each girl in years and months. Linear interpolation of the growth data was used for height and weight at menarche.

Results indicated that the mean weight of the undernourished girls at menarche did not differ significantly from the mean weight of the well-nourished controls. However, the undernourished girls attained menarche two years later than the control group and at a significantly greater height. The data were in accord with earlier findings and supported the hypothesis that a critical body weight triggers menarche.

Evidence was presented for a "compensatory mechanism", the weight-dependency of menarche, operating in human beings for environmental and genetic variation. This results in a reduction in the variation of body size at sexual maturity by delaying or advancing the age of sexual maturation. An example of such compensation for environmental variations was shown by the prolonged growth of the undernourished Alabama girls to the same mean weight at menarche as the controls.

Historical weight data indicate that compensatory growth to a critical weight at sexual maturity has resulted in a relatively fixed size at sexual maturity and adulthood. The mean weight of about 46 kg. at menarche has been evidenced in Caucasian girls for over a century.

Since birth weight is correlated with the mother's prepregnancy weight, and infant survival is correlated with birth weight, this weight-dependency regulation of female size at sexual maturity has selective advantages for the species.

Is There Really a Need for Textile Flammability Legislation?

by E. M. CROWN
Assistant Professor, School of Household Economics,
University of Alberta, Edmonton, Alberta

The question of whether or not there is a need for legislation to control the flammability of textile products is a very complex one, and has stirred up much controversy in many countries in recent years. Fortunately, the controversy has been the stimulus for the development of much-needed research programmes which have been initiated to study the complex problems of textile flammability.

One real question that those proposing legislation must ask themselves is "How much protection does the consumer need?"

Burn Statistics

One aspect of the above question is the number of deaths and injuries caused by fabric fires. In most countries the statistics on burn injuries are still very scarce, although the situation is beginning to improve. When summarized, data from various sources(1,2,3,4,5) indicate that the ignition of clothing fabrics causes approximately 120 deaths per year in Canada and approxi- 2000-3000 deaths each year and 150,000 non-fatal injuries each year in the United States.

Statistics are useful in determining which textile products are the most hazardous. Information in recent publications(4,5,6,7) shows that young children and elderly people are involved in a large number of the fires leading to death or severe injury. Other data(8,9,10,11) show clearly that bedding is involved in many of the fires causing death or injury. It is not as clear, however, which of the bedding items (mattresses, blankets, sheets) present the greatest hazards.

Statistics are needed which will indicate which fibers and fabric constructions are involved in most of the fires. These statistics are difficult to collect and are very scarce, but are necessary before it can be determined which products present the greatest hazards and therefore which tests will predict the flammability performance of given products. Various agencies which are now engaged in attempts to collect the necessary data include the U.S. Public Health Service(12), The Information Council on Fabric Flammability formed in 1967(13), and in Canada, the Federal Department of Consumer and Corporate Affairs.

Education

It is considered by experts(3,7) that most of the fires are caused by carelessness, and it might seem logical therefore, that they could be avoided if people were better educated to the dangers of flammable substances. However, while education is an important avenue that could be improved, it is not probable that it alone will solve our problems. People are well aware of the hazards of smoking in bed, or of allowing children to play with matches, but these are still two major causes of textile fires.

James Ryan in a recent article(14) states: "One of the reasons for the Amendments to the Flammable Fabrics Act, and many other pieces of legislation that are now before the Congress or have been before it in recent years is a philosophy that trying to educate people to behave safely is not enough . . . Educational efforts have been impressive in their scope but not impressive enough in their results." The main reason for the lack of effectiveness is seen to be the indifference of the public.

Are Consumers Concerned?

If one was to pose this question to some consumer advocates, they might answer "Yes." They suggest(15) that if the textile industry was to spend as much money promoting fire-resistant fabrics as it spends on durable press, it could sell the public on the advantage of protecting themselves and their children. However, it seems that these advocates are not truly representative of the consuming public. A past Research Committee Chairman of the Consumers' Association of Canada has indicated that she agrees with the author that most consumers are "not unduly concerned"(16).

Many experts who have been studying the problem of marketing flame-resistant fabrics agree that in general consumers are not concerned(3,15,17,18), and that they are not willing to pay extra for safety. It seems that safety is not a marketable commodity. In Britain where people have been given the choice of buying flame-resistant night clothes at a slight premium or flammable products labelled "Keep Away from Fire," most choose the flammable garment.

The lack of concern for safety is not limited to fabrics. It was seen very clearly when automobile manufacturers introduced seat belts as an option: very few people bought them. Even now that these belts are compulsory, many people do not use them and it can be concluded that if people do not use safety features when they have them, they are not likely to voluntarily pay extra for such features. This is especially true, in the case of flame-resistant fabrics, if the finish alters the desirable properties of the fabric.

A representative of the Lowenstein Company has stated(4): "We have advertised the 'Firegard' finish availability since 1969. Despite all this exposure and the acceptance of our products by some of our leading chains and manufacturers, we see a distressing lack of of awareness on the part of consumers who seem to believe that fire deaths or injury cannot or will not visit them. Therefore, we are in favour of standards which will protect the consumer without gross dislocation of the manufacturing and distributing complex . . ."

It appears therefore that education is not the total answer, but it should not be ruled out as one of the many things that must be attended to. Safety leagues and councils as well as governments have gone to great efforts in produring bill-boards and posters to impress upon people the value of seat-belts in automobiles. A similar effort might help to make people aware of the value of flame-resistant textiles for some uses.

The home economist could be a key figure in advising people of those fabrics or garments where flame-resistance is especially desirable. She can also acquaint herself with the progress being made in flame-retardant fabrics, and pass this information to the consumer.

As one reviews the burn statistics given earlier, and then realizes that the consumer's own concern is not likely to protect him, it becomes apparent that he does need some protection. The next question then, is "How should this protection come about: through voluntary industry effort or through government standards?" It is the author's opinion that there will be some effort on the part of industry but that some form of government standards are also necessary to achieve best results.

Industry's Part

It is probably true that industry is more co-operative with consumers than ever before. It is also true that some companies have already produced acceptable fire-resistant products.* However, at the recent international Duttweiler Conference on Textile Flammability and Consumer Safety(19), European industry spokesmen seemed to be of the opinion that they should "retain the consumer's right to live dangerously." The group may not have been representative of American or Canadian industry, but it is somewhat logical to assume that there are some industry spokesmen here that might think in a similar manner.

It is becoming evident that government agencies in various countries believe that it cannot be left up to industry to regulate themselves. The U.S. Federal Trade Commission's feelings have been summarized: "The Federal Trade Commission characterizes efforts at industry self-regulation as ineffective, unenforceable, and patently inadequate. The report asserts that industry self-regulation permits the least responsible segments to retard progress. That only strong Federal Safety standards can stimulate adequate voluntary action seems to be the judgement of the commission"(20).

What Have Governments Done So Far?

It is not within the scope of this paper to discuss all the legislation passed and standards set; therefore, in trying to give a brief account of the progress in setting standards to date, I will deal only with Great Britain, the United States, and Canada.

In Great Britain, the sale of highly flammable children's nightwear was prohibited in 1964, and since 1967 manufacturers have had to label all adult nightwear which does not pass a slow combustion test(21). It is estimated(12) that the 1964 ruling has reduced the fatal burns in children by 50%. But the regulations haven't been entirely successful because the test method was designed for cotton fabrics while many nylon garments were sold which passed the test but were flammable. A flammability working party has drafted a proposed revised standard(22) and it is hoped that this will be more applicable and reproduceable.

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*Lowenstein's Firegard; Klopman's K-Guard Nomex fabric; American Viscose's PFR rayon.

In the United States, the 1954 Flammable Fabrics Act limited only the sale of highly flammable textiles. Since most of the clothing fires that have been reported, however, have involved textiles that would pass the Commercial Standard 191/53, the Act was amended in 1967(23) to include interior furnishings as well as wearing apparel. The Amendment did not set standards but authorized the Secretary of Commerce to set standards where he found them to be both technologically feasible and necessary to protect the public against unreasonable risk. Essentially, therefore, the Secretary is required to prove the hazard of a product before he can set a standard for that product. This has meant that during the period since 1967 few standards have been set as it is very difficult to get statistics. Another reason for the small number of standards is that as yet, standards for many products are not feasible because a suitable test method has not been found to truthfully predict the hazard posed by the product tested. (See note at end of article.)

Neverthless, one standard is now in force as a result of the Amendment, The Standard for Surface Flammability of Carpets and Rugs, the pill test(24) designed specifically to protect the public from the occurrence of fire from small ignition sources, such as glowing fireplace embers. This standard applies only to carpets longer than six feet and with a surface area greater than 24 square feet, but another standard(25) should be in force by the end of 1971 for the small carpets that are not covered by the above.

A standard for children's sleepwear(26) was issued on July 28, 1971, and will be in force by July 30, 1972. This standard applies to children's sleepwear up to and including size 6X. As well as providing for the testing of fabrics, the standard covers the testing of those parts of garments that become more flammable with the addition of seams or trim. The standard is quite stringent because of the need to protect children. The setting of a standard for children's dresses is also a priority.

The Secretary of Commerce has also given notice of need for standards for mattresses and blankets(10,11). The National Bureau of Standards is presently working to find test methods suitable to test these products. Upholstered furniture and draperies will probably also be tested. (See note at the end of article.)

An important development in Canada was the establishment in 1967 of the Federal Department of Consumer and Corporate Affairs, whose responsibilities include the protection of the consumer. In 1969, this department introduced Bill S-26, The Hazardous Products Act (27) which is similar to the U.S. Flammable Fabrics Act in that it permits the department to take action against products which can be shown to be unduly hazardous. By the time of writing, three regulations have been brought in under the Act. On Feb. 10, 1970, fabrics or wearing apparel which are banned in the U.S. were banned from sale in Canada(28). In April, 1971 it was announced that a new standard for bedding will have to be met by March 31, 1972, and will include all blankets, sheets and other bedding produced in or imported into Canada (29). Regulations were announced in November, 1971, setting minimum standards for the flammability of textile products (30). Effective immediately, all textile products for consumer use must meet a minimum requirement where a fixed length of fabric must not burn in less than 3.5 seconds in a standard test. Products with a raised surface must have a burn time of not less than 4 seconds. Neither of these are too stringent, but material for children's nightwear must have a minimum burn time of seven seconds.

A Special Committee on Consumer Flammability Problems has been formed under the Canadian Government Specifications Board to research needs for standards and possible methods for evaluation. The committee has representation from government, industry and university personnel. Researchers in Canada have been working in the last few years to develop meaningful test methods. Recently the C.G.S.B. has introduced a "cigarette test" for mattresses (31, 32). (A similar test is likely to be used to evaluate mattresses in the U.S.). Two other test methods (33, 34) are being evaluated by interlaboratory tests and are apt to become the basis for future standards for some fabrics. Researchers are also studying the problems of smoke and toxic product generation. Fortunately, it seems that the Department of Consumer and Corporate Affairs is reluctant to set many standards until they are assured that a somewhat meaningful test method is available.

Arguments against Flammability Legislation

One argument that is used against flammability legislation is the increased cost of treated goods. It is estimated (35) that durable flame retardants that meet the U.S. standard for children's sleepwear cost about thirty cents per square yard and that rayon fibers with built in flame-retardants sell at double the cost of regular rayon. Some argue that the consumer should not have to pay this added cost involuntarily. It is likely, however that the cost will go down, as it becomes necessary to produce more treated goods. Treatment to make mattresses fire resistant adds only approximately two dollars to the cost of a mattress.

Another cost to the consumer is considered to be the loss of desirable properties, especially hand and strength, in treated fabrics. It is true that early treated fabrics were stiff, but in general, this problem has been largely overcome. The author does not feel that it has been satisfactorily proven, however, that treated fabrics will not cause skin problems.

A strong argument against legislation is the fact that available test methods are not meaningful and results are often difficult to reproduce. Results on the same fabrics by different test methods have been shown to be almost as random as those resulting from pulling numbers out of a hat (36). The need for better test methods has been dealt with earlier, but one Canadian expert (37) feels that methods must be found to evaluate each of the following properties: rate of burn, ease of ignition, smoke produced, toxicity of combustion products, ease of extinction, heat generated, afterglow, and limiting oxygen index. Then, before setting standards for any given product, it could be determined which of the above factors it is important to measure. If this could be done, standards might be meaningful.

It is possible that even if standards are meaningful they may not be too useful if they are difficult to control. To a certain extent, the way in which control is exercised will depend on how much governments are willing to spend on a means of control. However, industry must be hoping that the test methods included in standards will be ones that can be carried out without excessive increased costs for testing.

Summary:

It can be seen that we do need protection against the dangers of flammable textile products. It is hoped that industry will take the initiative and come up with ways of producing nonflammable products where it is needed. However, since the consumer is not very apt to support the parts of the industry which do so, it is probably necessary for government organizations to set standards where it is found that a product presents a hazard to the public.

In setting standards, the government must be aware of some special problems. First, it must not set standards which will increase the cost of products so much that consumers can no longer purchase them. Secondly, it must be careful not to set standards for which there is no meaningful method of evaluation: here it is hoped that methods will be available in the near future for evaluating many products. Thirdly, it must not set standards which the industry is not able to meet, although it is realized that in some cases, industry will develop their technology more quickly once a deadline has been set.

It has been suggested (37) that the old idea of Caveat Emptor—let the buyer beware—is gradually changing to an idea of safeguarding the public. Let us hope that in the case of flammable textile products at least, we can achieve a situation where the public is protected from great danger, but where the consumer still has a choice and a responsibility.

NOTE 1: Since the article was written, further action has been taken by the U.S. Commerce Department, under the Flammable Fabrics Act. The standards for Children's Sleepwear and Mattresses have both been finalized. Notice of need has been issued for standard for both upholstery and children's sleepwear sizes 7—14.

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Special coffees that are made with great flourish in many restaurants can easily be made at home. So say the makers of Yuban instant coffee. To prove it they have designed an attractive wall poster that describes how to make exotic Café Borgia, Café Brûlot or warm smooth Irish Coffee. This Gourmet Coffee Guide may be obtained for 75 cents plus one 8 oz. or two 4 oz. inner seals from Yuban Instant Coffee, by writing to Yuban Instant Coffee Guide, P.O. Box 8055, St. John, N.B.

Hamburger Fixin's

French's have introduced the ultimate in one skillet meals. They've used all their convenience food know-how to create a packaged Hamburget Fixin's that with the addition of a pound of ground beef results in a delicious family meal. It comes in three varieties —Beef Noodle Dinner — containing egg noodles, a tasty sauce mix and an envelope of peas and onions. The second is a zesty Chili Tomato Macaroni Dinner that has onions and green peppers as its vegetables. Precooked rise, seasoned sauce mix and almonds comprise the last of this trio, Rice Oriental Dinner. Short cooking time and delightful flavour are what gives these dinners great appeal. They sell for about 59¢ per package.

Telephone Intercoms

Fanon Electronics of Canada Limited have recently introduced three solid state push button communication systems — Select-Talk, All-Talk, and Page-All. They are designed for small and medium-size telephone intercom installation. Select-Talk is a selective tone calling, full trunkage system capable of up to nine simultaneous conversations on 19 phones in all-master, master-to-remote or intermix installations. Two relay adapters. In talk back paging, users press an assigned pushbutton that connects the caller to a central PA system for wide area paging. Called parties can reply directly to speakers or horns or through telephone remotes.

Fanon's All-Talk Series combines the selective tone calling feature with the economy of a "party" common talking line. This is available in three models—an eleven station master, a six-station master and the All-Talk model.

Page-All is Fanon's "courtesy" wide-area paging system and telephone intercom, quietly alerting the called party without disturbing others with an annoying PA "blast". The amplifier portion of the Page-All permits any number of phones up to 100 to be added to the system with automatic adjustment of volume level of all paging speakers.

For further information please contact Burton Sohigian of Canada Ltd., 234 Eglinton Ave. East, Toronto, Ontario (416) 487-4717.

Self Cleaning Irons

"Unless an iron cleans the water tank, water valve, steam chamber and steam vents, the term 'self-cleaning' is merely a claim, not a fact" — so declared John S. Chamberlain, General Electric Vice President. At General Electric there is concern about claims of a "self-cleaning" capability of other irons on the market that could create confusion. Mr. Chamberlain went on to say that since G.E. was the originator of the self cleaning iron concept consumers should know exactly what they are buying.

That a self cleaning system will steam better and longer with most tap water, the process must clean the four components mentioned earlier. If internal water passages become clogged due to the build-up of mineral deposits in the iron's water tank or valve then the iron will cease to steam properly. Also a clean water chamber and vents are necessary to prevent unsightly brown spotting of fabric being ironed.

The G.E. self cleaning system is specifically designed to help clean all four important areas. Press one button, one time, and the cleaning process is activated. This is quick, easy and convenient for the busy homemaker. General Electric Self Cleaning irons are now available in Canada.

Happenings

INTERNATIONAL FEDERATION OF HOME ECONOMICS

Miss Ruby MacNeill of St. John, N.B. has agreed to be the C.H.E.A. Representative to the I.F.H.E.

Miss Isabel Horne from Australia has been chosen to be the new Acting Chairman of the I.F.H.E.

MEMBERSHIP

As of December 31, 1972, membership in the C.H.E.A. was 1,137; 14 groups have paid the affiliation fee.

GUELPH TEAM STUDIES CONSUMER TEXTILE KNOWLEDGE

The consumer's knowledge of textiles and their care will come under the scrutiny of two University of Guelph consumer specialists over the next five years.

Commissioned by the Information and Public Relations Branch of the federal Department of Consumer and Corporate Affairs, the study will measure the consumer's levels of knowledge, his uncertainty, and his sources and uses of information about textile fibres and their care. A grant of $20,000 has been received by the University to cover the first year of the study, to be conducted by Dr. Fred Edgecombe and Dr. John Liefeld.

MRS. NORAH E. HOLCOMB

President C.H.E.A.

1964 - 1966

Mrs. Norah Elizabeth Holcomb, known to her many friends at Pat, died suddenly on December 20, 1972 at her home in Montreal. She retired in 1971 from the Protestant School Board of Greater Montreal where she had served as Home Economics Supervisor for eleven years.

Pat was born in Nova Scotia and grew up in Ste. Anne de Bellevue, with her sister Dorothy (Mrs. Mehler). Their father, Dr. McCarthy, was Professor of Chemistry at Macdonald College of McGill University. She married a chemist, the late Dr. Robert Kirkwood Holcomb, who was on the staff of McGill University.

After graduation from McGill University where she studied dietetics at Macdonald College, Pat completed a post-graduate internship at St. Luke's Hospital in New York and then became an assistant dietitian with Jas. A. Ogilvy's in Montreal. She used her dietetic education during the war years when she served as a Lieutenant Dietitian with the Canadian Army Medical Corps in positions at Quebec City, Camp Borden and Debert, N.S.

Immediately prior to her war service, Pat had started on a career in Home Economics teaching with the School Board in Montreal. She returned to Montreal in 1946 and continued as a teacher until she was appointed as Home Economics Supervisor in 1959. Her friendly interest and encouragement will be remembered by those who spent all or part of their teaching careers in Montreal. As a tribute to her work as an Educator, she was awarded the Order of Scholastic Merit by the Quebec Department of Education at the annual convention of the Provincial Association of Protestant Teachers in 1971.

While Pat was Supervisor (later Consultant) in Home Economics for the Protestant School Board of Greater Montreal, she made a tremendous contribution to the future of Home Economics education in Quebec. She served on a Provincial (bilingual) Committee to develop a curriculum which was prepared in French and English, to become one of the first of its type in Quebec. This curriculum was made official for use in all Quebec schools in June 1969 and during the next two years Pat worked unceasingly to promote the new aspects of Home Economics which the program presented. It is a tribute to her that the Quebec Association of Home Economics Educators made the following motion at their Executive meeting, January 9, 1973:

"It is recommended that Q.A.H.E.E. suggest that the Food Science Department of McGill University establish an entrance scholarship into Home Economics Education in memory of Norah (Pat) Holcomb."

They also voted $300.00 to this fund.

Because she had a keen mind and an outgoing personality, it was inevitable that Pat would serve with her professional colleagues in many positions of responsibility in the Montreal and the National Home Economics and other Associations. She was very active in the Quota Club of Montreal (associated with Quota International Incorporated) of which she was President during 1957-58, Lieutenant-Governor of District Eighteen in 1958 for a two year term and Governor of the District in 1960 for a further two year term of office.

As President of the Canadian Home Economics Association from 1964-66, Pat became widely known by Home Economists throughout Canada. In her presidential message, published in the Journal of the Home Economics Association in December 1964, Pat compared the Association membership to the seasons of the year. She saw the youthful members as resembling the Spring, eager to start growing; the Summer as the early years of maturity; the bright crisp Autumn as mature leaders who have reached the colourful pinnacles of their varied careers; then the lovely quiet, brightness of a winters' day with soft new snow (a Quebec day, as we say) as retirement, when one's work is done and there is time in serenity to do the things one has always dreamed about. For her, these days were short. She made us happy by her presence and her own words, written in 1964, when she stated that "the days pass so quickly", will be echoed by us. "She passed this way too quickly."

LETTER TO THE PRESIDENT

Dear Miss Bracher:

The shock of the death of Theodora Bryce has passed. The loss remains. Many persons have expressed to us a desire to make a contribution to a memorial.

It was the decision of the Faculty of Home Economics of the University of Saskatchewan that the yearly presentation of a book prize, (probably a good dictionary) to the student from the College of Home Economics receiving the highest mark in English 102, would be a suitable recognition.

Those of you who knew Theodora Bryce are certainly aware that she was precise and fluent in her use of English. Her letters themselves were examples of literary excellence. She constantly urged students to strive to improve their written communication. It seems entirely fitting that a memorial to her should further this cause.

The yearly presentation of this award will serve to keep the name of Theodora Bryce before students of the College and before the general public.

Theodora Bryce was a truly dedicated professional. She had many interests and many friends. We ask you to pass this message along to the members of your organization who may wish to join us in establishing this fund.

The Development Office of the University of Saskatchewan, Saskatoon Campus, will receive any donation of funds. Please make contributions payable to the University of Saskatchewan with the notation that it be earmarked for the "Theodora Bryce Book Prize". Official receipts will be issued by the University of Saskatchewan which may be used by individuals for Income Tax Purposes. Donations of any size will be useful. The yearly book prize will be continued until the fund is exhausted.

Yours very sincerely,
(Mrs.) Emmie Oddie,
Committee for Theodora Bryce Book Prize,
College of Home Economics,
University of Saskatchewan,
Saskatoon, Sask. S7N 0W0